

WHAT IS CLAIMED IS:

1. A method of correcting output image squareness in a laser printer system having a Raster Output Scanning (ROS) device comprising:
 - (a) pivotally mounting said ROS device;
 - (b) printing a test pattern including a plurality of predetermined markers;
 - (c) measuring a plurality of distances between said markers;
 - (d) calculating a skew angle based plurality of distances; and
 - (g) rotating said ROS device by an amount sufficient to correct said skew angle.
2. The method of correcting output image squareness as set forth in claim 1, wherein said rotating said ROS is performed automatically by an adjustment system connected to said ROS.
3. The method of correcting output image squareness as set forth in claim 1, wherein said measuring a plurality of distances and said calculating a skew angle is independent of a registration edge skew.
4. The method of correcting output image squareness as set forth in claim 1, wherein said calculating a skew angle is performed by a first program in said laser printer system.
5. The method of correcting output image squareness as set forth in claim 1, wherein said measuring a plurality of distances is performed automatically by a second program in said laser printer system receiving a scanned image of said test pattern from a scanner attached to said laser printer system.

6. The method of correcting output image squareness as set forth in claim 1, wherein said plurality of predetermined markers comprise at least three rectangularly positioned markers.

7. The method of correcting output image squareness as set forth in claim 6, wherein said measuring a plurality of distances between said markers comprises:

- (a) measuring a horizontal distance between two of said markers;
- (b) measuring a vertical distance between two of said markers; and
- (c) measuring a diagonal distance between two of said markers.

8. The method of correcting output image squareness as set forth in claim 7, wherein said calculating a skew angle utilizes the Law of Cosines.

9. The method of correcting output image squareness as set forth in claim 1, wherein said plurality of predetermined markers comprise at least three markers arranged in the form of an isosceles triangle.

10. The method of correcting output image squareness as set forth in claim 9, wherein said measuring a plurality of distances between said markers comprises measuring at least two legs of said isosceles triangle.

11. In a laser printer system having a pivotally mounted ROS device for the purpose of correcting a skew angle of images printed by said laser system, an improvement wherein said skew angle is determined by a measurement of a plurality of distances between a plurality of printed markers arranged in a predetermined configuration.

12. The improvement as set forth in claim 11, wherein said skew angle is determined by the Law of Cosines from a measurement of a horizontal distance

between printed markers, a measurement of a vertical distance between printed markers and a measurement of a diagonal distance between printed markers, wherein said markers are printed in a rectangular arrangement.

13. The improvement as set forth in claim 11, wherein said skew angle is determined by a measurement of two or more legs of a triangle, and wherein said markers are printed in an arrangement forming the triangle.

14. The improvement as set forth in claim 13, wherein said triangle is an isosceles triangle.

15. A laser printing system comprising:

(a) a user interface; and

(b) a laser printer including:

(i) a photoreceptor belt;

(ii) a pivotally mounted ROS device;

(iii) an automatic adjustment system for correcting a skew angle of said ROS device;

(iv) a first program configured to calculate said skew angle from a plurality of distances of a predetermined test pattern printed as an output image, wherein said plurality of distances are received from said user interface; and

(v) a second program configured to adjust said skew angle of said pivotally mounted ROS device utilizing said automatic adjustment system.

16. The laser printer system of claim 15, wherein said automatic adjustment system includes:

(a) a block having a notch configured to receive a ROS ball attached to a side of said ROS device opposite a pivotally mounted side of said ROS device;

(b) a cam configured to maintain contact with a side of said block and configured to move said block in a direction substantially parallel to a direction of travel of said photoreceptor belt, when said cam is rotated; and

(c) a stepper motor configured to rotate said cam wherein said stepper motor is controlled by said program configured to adjust said skew angle of said pivotally mounted ROS device utilizing said automatic adjustment system.

17. The laser printer of claim 15, wherein said test pattern comprises at least three rectangularly positioned markers.

18. The laser printer of claim 17, wherein said plurality of distances comprise:

- (a) a horizontal distance between two of said markers;
- (b) a vertical distance between two of said markers; and
- (c) a diagonal distance between two of said markers.

19. The laser printer of claim 18, wherein said program is configured to calculate said skew angle calculates said skew angle using the Law of Cosines.

20. The laser printer system of claim 15 further including:

- (a) a scanner; and
- (b) a third program configured to receive a scanned test pattern image from said scanner and to calculate plurality of distances from said test pattern image, wherein plurality of distances are received by said first program from said third program.